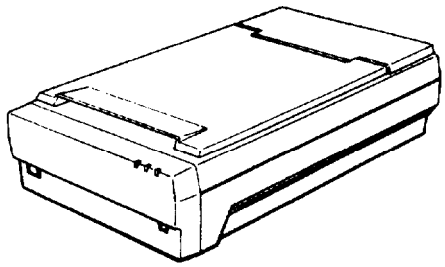
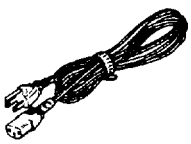
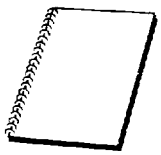


Scanner main unit



Power cable



User s Guide

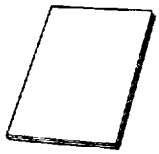
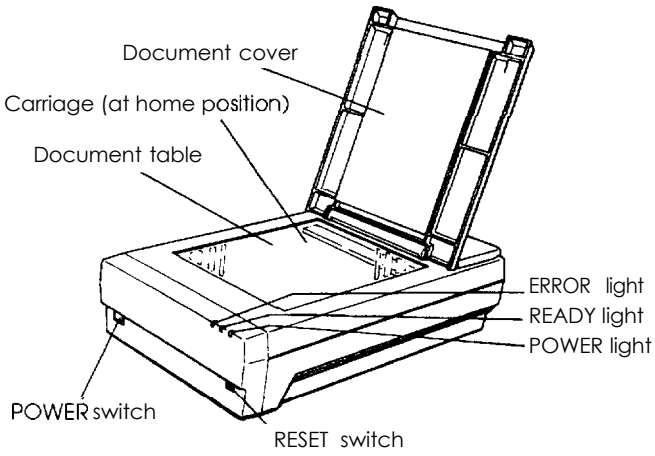
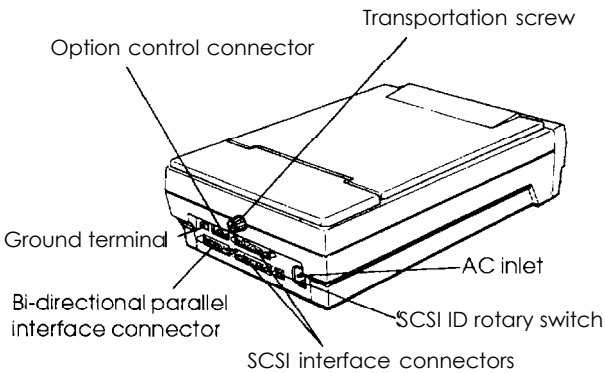


Image Sample





Scanner Specifications

Scanner type:	Flatbed, color/monochrome
Photoelectric device:	CCD line sensor
Effective pixels:	3400 dots by 4680 dots at 400 dpi, 100%
Maximum document size:	216 mm by 297 mm (8.5 inches by 11.7 inches) US letter size or A4
Scanning resolution:	400 dpi
Output resolution:	50, 72, 75, 80, 90, 100, 120, 133, 144, 150, 160, 175, 180, 200, 216, 240, 300, 320, 360, 400, 480, 600 and 800 dpi. Values above 400 through software interpolation.
Color separation:	By switching light sources (G, R, B)
Reading sequence:	Monochrome mode: One-time scanning (Dropout color selectable from Green, Red, or Blue.) Color page sequence mode: Three-time scanning (G, R, B) Color line sequence mode: One-time scanning (G, R, B)
Size:	50% to 200% in 1% steps.
Image data:	8 bits per pixel per color maximum
Gradation:	8 bits per pixel per color maximum
Brightness:	7 levels
Halftoning process:	Enable/disable selectable. 3 halftoning modes (A, B, and C) and 4 dither patterns (A, B, C, and D) for bi-level data (Halftoning mode A only in color line sequence mode) (2 downloadable dither patterns)
Gamma correction:	2 for CRT display 3 for printer 1 for user defined
Color correction:	1 type for CRT display 3 types for printer output, available in color line sequence mode only
Interface:	Bidirectional parallel and SCSI
Light source:	Noble gas fluorescent lamps (3 lamps)
Reliability:	Main unit: MCBF 100,000 cycles of carriage movement

Dimensions and weight:	Width: 368 mm (14.5 inches) Depth: 577 mm (22.5 inches) Height: 161 mm (6.5 inches) Weight: about 12 kg (26 lbs)

Electrical Specifications

Voltage:	120 VAC, ±10%
Frequency:	49.5 to 60.5 Hz
Power consumption:	Approx. 50 W (max)
Insulation resistance:	20 m between AC power line and chassis at 500 VDC

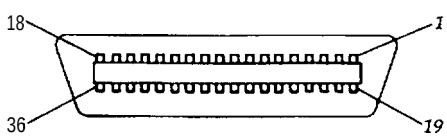
Environmental Conditions

Temperature:	Operation: 40 F to 95 F (5 C to 35 C) Storage: 10 F to 150 F (-20 C to 60 C)
Humidity:	Operation: 30% to 80%, without condensation Storage: 20% to 85%, without condensation
Operating conditions:	Ordinary office or home conditions. Extreme dust should be avoided. Operation under direct sunlight or near a strong light source should be avoided.

Note:
Specifications are subject to change without notice.

Parallel Interface Specifications

Interface type:	Bidirectional parallel interface
Data format:	S-bit parallel
Synchronization:	By external strobe pulse
Handshaking:	By ACKNLG and BUSY signals
Logic level:	Input/output data and interface control signals are TTL level compatible
Connector type:	36-pin Centronics® type connector
Connector pin arrangement:	



SCSI Specifications

Interface type:	ANSI X3.131-1986 standard
Function:	The following functions are included. BUS FREE phase ARBITRATION phase SELECTION/ RESELECTION phase COMMAND phase (Logical Unit number is fixed to 0 and command link function is not supported.) DATA phase Data in phase Data out phase STATUS phase MESSAGE phase (Includes MESSAGE IN phase and MESSAGE OUT phase) ATTENTION condition RESET condition
Logic level:	TTL level compatible

Electrical standard: As per ANSI X3.131-1986

ID Setting:	Selectable from 0 to 7 with the rotary switch. (8 and 9 should not be selected.)
Connector type:	Two 50-pin connectors

Scanning Functions

Scanner settings

The table below summarizes the scanner functions and the settings available on your scanner. All of these functions are controlled by the software commands from your scanner software.

Function	Available settings
Resolution	23 settings from 50 to 800 dpi
Size	50% to 200% at 1% step
Data format	1 to 8 bits per pixel per color
Color mode	Color line sequence mode, color page sequence mode and monochrome mode (dropout color selectable)
Brightness	7 levels
Halftoning mode	3 modes and disabled 4 dither patterns
Gamma correction	5 settings for output devices
Color correction	4 settings for output devices

Resolution guidelines

This table shows the recommended resolutions in dots per inch or pixels per inch for the image types and printing methods. Also, you may want to experiment with your scanner settings, possibly using a cropped version of your image to save time, until you achieve the desired results.

	Line art	Gray scale	Color
Black and white printer	300-400 7	5	75
Electroniccolor printer	300-400	150-200	150-200
Printing press/Imagesetter	400-800	150-200	150-200

Data format

Data format	Monochrome	Color
1 bit/pixel/color	2 grays	8 colors
2 bits/pixel/color	4 grays	64 colors
3 bits/pixel/color	8 grays	512 colors
4 bits/pixel/color	16 grays	4,096 colors
5 bits/pixel/color	32 grays	32,768 colors
6 bits/pixel/color	64 grays	262,144 colors
7 bits/pixel/color	128 grays	2,097,152 colors
8 bits/pixel/color	256 grays	16,777,216 colors

Initialization

The scanner can be initialized (returned to a fixed set of conditions) in three ways.

Hardware initialization:

- ❑ When the power is turned on.
- ❑ When the scanner receives an INIT signal at the parallel interface (pin 31 goes low).

Software initialization:

- ❑ When the software command ESC 62 (initialize the scanner) is received.

Default settings

The table below shows the default conditions when the scanner is initialized.

Item	Default
Data format	1 bit/pixel/color
Resolution	100 dpi
Size	100%
Reading area	850 × 1170 dots, no offset
Color mode	Monochrome (standard)

When the scanner is initialized, the scanner terminates the scanning operation, and the carriage returns to the home position (rear of the scanner).

Problems and Solutions

The problems you may have while using the scanner often involve the operation of your software and computer. Problems fall in the following major categories:

- ❑ Incorrect setup of the interface
- ❑ Inappropriate selection of the scanner functions
- ❑ Incorrect setup of your computer or software
- ❑ Incorrect operation of your software.

Scanner errors

If an error occurs, the scanner stops operating and the READY and ERROR lights show the type of error.

Error type	READY	ERROR
Command error	On	On
Interface error	Off	Flashing
Fatal error	Flashing	Flashing
Option error	Off	Off

Command error

The scanner received incorrect commands from your scanning software.

When this error occurs, try the scanning operation with your software over again. The scanner returns to normal when it receives correct commands. Normally you do not need to reset the scanner.

Interface error

The interface setup is wrong, or the scanner is not properly connected to the computer.

When this error occurs, check the interface connection. Push the RESET button or turn the scanner off and then back on to reset it.

Fatal error

This indicates one of the following problems:

One or more fluorescent lamps needs to be replaced.
The transportation screw is not released.
The scanner is broken.
There is a problem, such as an open cover, with the optional automatic document feeder.

Check that the transportation screw is released and check the automatic document feeder; then push the RESET button. If the scanner still does not operate properly, try turning the scanner off and then back on. If the scanner still does not operate properly, or if this error occurs repeatedly, consult your dealer.

Option error

This indicates a problem such as a paper jam with an installed option unit.

Check the option unit and correct the cause of the trouble.

Self Test

To run the self test, follow the instructions below:

1. Set the SCSI ID switch to 8.
2. Turn on the power while holding down the RESET button. Continue holding the RESET button until initialization is complete. (It takes approximately 10 seconds for self test initialization to complete. Watch for the LEDs to change in the sequence described below to tell that initialization is complete.)

   Just after power on:
   Power LED (green) - ON
   Ready LED (green) - OFF
   Error LED (red) - OFF

   After a few seconds:
   Power LED (green) - ON
   Ready LED (green) - ON
   Error LED (red) - OFF

   After a few more seconds:
   Power LED (green) - ON
   Ready LED (green) - OFF
   Error LED (red) - ON

   Finally, all LEDS are lit
3. You can now release the RESET button. The self test mode begins, and the scanner operates automatically.
4. You can stop the self test either by pressing RESET or turning the power off.

Options

Option Name	Product Number	Description
Automatic Document Feeder (ADF)	8813011	Feeds up to 30 sheets. Replaces scanner cover, but still allows scanning of individual items.
Transparency Unit	8813021	Allows scanning of slides, negatives. and transparencies. Replaces scanner cover, but still allows scanning of individual items. Allows scanning of items up to 5"x 5".
Bidirectional Parallel Interface Kit	BIDIDOS	Includes bidirectional parallel board for the PC, cable, TWAIN scanner driver, and image editing software.
SCSIDOS Interface Kit	SCSIDOS	Includes SCSI board for the PC, cable, TWAIN scanner driver, and image editing software.
Mac Interface Kit	ESMAC	Includes scanner Plug-In Module (PIM) and Desk Accessory (DA), cable, Epson Apple Scanner Driver, and image editing software.
Bidirectional Parallel Interface Board for the PC	8808012	Available separately from kit for customers who already have scanning software. Provides a bidirectional port in the PC to connect to the parallel interface in the scanner.
Bidirectional Parallel Cable	CI-SE-A	Available separately from kit for customers who already have scanningsoftware.
ES-800C	B019011	Scanner.

Interface Kit Contents

*BIDIDOS **Interface Kit***

- ❏ Picture Publisher 3.1
- ❏ Caere OCR TryPack
- ❏ TWAIN Scanner Driver
- ❏ Bidirectional Interface Board for the PC
- ❏ Bidirectional Parallel Cable

*SCSIDOS **Interface Kit***

- ❏ Picture Publisher 3.1
- ❏ Caere OCR TryPack
- 3 TWAIN Scanner Driver
- 3 SCSI Interface Board for the PC
- ❏ SCSI Cable (50-pin to 50-pin)

*ESMAC **Interface Kit***

- ❏ Adobe Photoshop 2.0
- ❏ PIM and DA
- ❏ Epson Apple Scanner Driver
- ❏ SCSI Cable (50-pin to 25-pin)

Information Reference List

Engineering Change Notices

None

Product Support Bulletins

None

Technical Support Bulletins

None

Related Documentation

TM-ES800C	ES-800C Service Manual
PL-ES800C	ES-800C Parts Price List
SPKES800C	ES-800C Self Paced Kit
4001696	ES-800C User s Guide
TM-B813021	Transparency Unit Service Manual
PL-B813021	Transparency Unit Parts Price List
SPKB813021	Transparency Unit Self Paced Kit